



Technical Meeting on Producing Potable Water Using Small Modular Reactors

**Hosted by the
Government of the Federative Republic of Brazil**

**through the
Universidade Federal do Rio de Janeiro**

Rio de Janeiro, Brazil

24-27 November 2025

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Information Sheet

Introduction

Ensuring a supply of safe potable water is a growing challenge that vast regions of the world are facing. Seawater desalination, often in combination with other approaches, provides a highly effective solution to address freshwater scarcity in these areas. However, because of its rapidly expanding utilization, high energy intensity and associated high emissions when powered with fossil fuels, the decarbonization of large-scale desalination is essential for sustainable development. Nuclear reactors, capitalizing on both heat and electricity, offer a low-carbon option to provide the energy needed for water desalination facilities.

Small modular reactors (SMRs) could provide specific benefits towards producing potable water. SMR components may be mass manufactured in factories and then transported and installed on sites, which may make them more affordable and faster to build than traditional large nuclear power plants. SMRs may also be sited in remote locations and in areas lacking sufficient transmission lines and grid capacity. Additionally, SMRs are suitable for flexible operation, providing stability to electrical grids in integrated energy systems that combine nuclear, variable renewables, and energy storage to provide resilient and clean energy supply to different uses in the form of heat and electricity, such as potable water production.

During this technical meeting, recent worldwide developments in the area of water desalination (for both seawater as well as brackish water) will be reviewed. In addition, there will be discussions on recent technological developments that could make the use of nuclear energy an effective manner for potable water production.

Objectives

The objectives of the meeting are the following:

- Review recent worldwide developments in the area of water desalination, for both seawater as well as brackish water.
- Discuss the status, prospects, impediments and deployment indicators of worldwide projects on water desalination with nuclear energy.
- Discuss and identify the technological advancements and solutions that are most suited to increase the effectiveness of nuclear energy, particularly SMRs, for potable water production.

Target Audience

The event is intended for project managers, decision makers, engineers and other stakeholders with relevant expertise in desalination with nuclear energy and associated issues, in countries with operating nuclear power plants, countries pursuing deployment of SMRs and advanced reactors in the view of producing potable water, as well as newcomer countries interested in pursuing nuclear desalination.

Working Language(s)

English.

Expected Outputs

The main expected output of this meeting is to develop an understanding of the needs of Member States regarding the production of potable water (e.g. desalination) using nuclear energy, provide a forum for exchange of information and identify potential future activities of the IAEA that could support Member State efforts in this area. This meeting will also collect the current status and development potential, and associated challenges, of various technologies that could support the utilization of nuclear energy for the production of potable water.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **24 September 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
 - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **24 September 2025**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA’s scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA’s mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 2 pages (including figures and tables). It should be sent electronically to Mr Francesco Ganda and Ms Molly-Kate Gavello, the Scientific Secretaries of the event (see contact details below), not later than **24 September 2025**. Authors will be notified of the acceptance of their proposed presentations by **24 October 2025**.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **24 September 2025**.

Visas

Participants who require a visa to enter Brazil should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Brazil.

IAEA Contacts

Scientific Secretaries:

Mr Francesco Ganda

Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 22859

Fax: +43 1 26007

Email: F.Ganda@iaea.org

Ms Molly-Kate Gavello

Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 26731

Fax: +43 1 26007

Email: M.Gavello@iaea.org

Administrative Secretary:

Ms Dejana Tadic

Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 22792

Fax: +43 1 26007

Email: D.Tadic@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.